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FLIESLER MEYER, LLP FOUR EMBARCADERO CENTER			MCDONALD, RODNEY GLENN	
SUITE 400			ART UNIT	PAPER NUMBER
SAN FRANC	ISCO, CA 94111		1753	

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Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)				
	10/074,379	TAYLOR ET AL.				
Office Action Summary	Examiner	Art Unit				
	Rodney G. McDonald	1753				
The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply						
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely. - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication. - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).						
Status						
1) Responsive to communication(s) filed on 14 Ju	1) Responsive to communication(s) filed on 14 June 2005.					
2a) ☐ This action is FINAL . 2b) ☑ This	action is non-final.					
	Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.					
Disposition of Claims						
4) Claim(s) 1-21 is/are pending in the application. 4a) Of the above claim(s) is/are withdrawn from consideration. 5) Claim(s) is/are allowed. 6) Claim(s) 1-21 is/are rejected. 7) Claim(s) is/are objected to. 8) Claim(s) are subject to restriction and/or election requirement.						
Application Papers						
9)☐ The specification is objected to by the Examiner.						
10)☐ The drawing(s) filed on is/are: a)☐ accepted or b)☐ objected to by the Examiner.						
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).						
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.						
Priority under 35 U.S.C. § 119						
 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 						
Attachment(s) 1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date S Patent and Trademath Office.						

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DETAILED ACTION

Allowable Subject Matter

Prosecution on the merits of this application is reopened on claims 1-21 considered unpatentable for the reasons indicated below.

The allowability of claims 1-21 is withdrawn in view of the newly discovered reference(s) to Ross (U.S. Pat. 4,017,736) and Block, "Disinfection, Sterilization, and Preservation", pp. 21, pp. 32, 33, pp. 182-190, pp. 553-565, Fourth Edition 1991.

Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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Claims 1-4, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu (U.S. Pat. 5,656,063) in view of Wang (U.S. Pat. 5,702,507) and Ross (U.S. Pat. 4,017,736).

Regarding claims 1, 9, Hsu et al. teach an air transporter with a housing 12 with a top (Figure 1; Column 4 lines 1-3) having a removable inlet 16 and an outlet 18. (Column 4 lines 8-10; Column 4 lines 14-15) Hsu teach an ion generator 36 which include a first electrode 38 and a second electrode 39. The electrodes communicate electrically. (Column 4 lines 32-36) A power generator (i.e. voltage applicator) is coupled between the electrodes. (Column 5 lines 53-54)

Regarding claim 2, the housing has a side extending downwardly from the top and the inlet 16 is located through the side. (See Figure 1)

Regarding claims 3, 9, the housing is elongated in the x and y directions. The inlets and the outlets extend along a direction of the elongated housing. (See Fig. 1)

Regarding claim 4, the housing is vertically upstanding and the outer is covered with vertically elongated fins. (See Fig. 1) Presumably the inlet fins could be vertically elongated similar to the outlet. In fact the inlet has in its center vertically elongated fins. (See Fig. 1)

Regarding claim 10, the second electrode is elongated in a direction of the elongation of the housing. (See Fig. 1)

The differences between Hsu et al. and the present claims is that the second electrode being removably mounted in the housing so that the second electrode can be removed for cleaning from the top through a port is not discussed (claims 1, 9), utilizing

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a germicidal lamp in the housing to expose the airflow to germicidal radiation is not discussed (claims 1, 9), the removability of the germicidal lamp after the inlet is removed is not discussed (Claims 1, 9).

Regarding the second electrode being removably mounted in the housing so that the second electrode can be removed for cleaning from the top (claims 1, 9), Wang teach an air cleaner where the electrodes can be removed for cleaning from the top of the air cleaner. (See Column 2 lines 63-68; Column 3 lines 1-4; Figure 2)

The motivation for providing a removable electrode is that it prolongs the lifespan of the device. (See Wang Column 1 line 43)

Regarding the use of a removable germicidial lamp (Claims 1, 9), Wang teach a removable ozone tube like a light tube (i.e. bulb) for eliminating bacteria. (Column 2 lines 10-19; lines 63-68; Column 3 lines 1-4) Ross recognize that an ultraviolet light source can be inserted in an air stream for eliminating airborne microorganisms. (Column 2 lines 34-40) Therefore, the combination of Wang and Ross suggest that a germicidal device can be inserted into the air flow and should be removable for cleaning. Ross suggest that such a germicidal device can be a UV radiation emitting light source. As to the inlet being removed first the inlet in Hsu could removed first to provide access into the interior and since as recognized by Ross that a UV germicidal lamp can be present in the interior of an air flow device this would meet Applicant's limitation of removing the inlet before removing the UV germicidal lamp.

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The motivation for providing a removable germicidal radiation source is that it allows for killing microorganisms in the air stream. (Ross Column 2 lines 38-40) and for prolonging the lifespan of the aircleaner. (Wang Column 1 lines 43)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Hsu by utilizing a second electrode that is removably mounted in the housing for cleaning, utilizing a germicidal lamp in the housing to expose the airflow to germicidal radiation, and utilizing a removabe germicidal lamp after the inlet is removed as taught by Wang and Ross because it allows for prolonging the operation of the device and for killing airborne microorganisms.

Claims 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu in view of Wang and Ross as applied to claims 1-4, 9 and 10 above, and further in view of Block, "Disinfection, Sterilization, and Preservation", pp. 33, Fourth Edition 1991.

The difference not yet discussed is the wavelength of ultraviolet radiation utilized.

Block suggest the UV radiation to be utilized for germicidal effect should range from 328 to 210 nm. (See Page 33)

The motivation for utilizing radiation within the range of 328 to 210 nm is that it allows for exposing the germs to lethal doses of radiation. (See Page 33)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have utilized radiation in the range of 245 nm as taught by Block because it allows for exposing germs to lethal doses of radiation.

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Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang (U.S. Pat. 5,702,507) in view of Ross (U.S. Pat. 4,017,736).

Regarding claim 5, Wang teach a housing 1 (column 2 lines 54-55; Figures 1, 2) having an inlet and outlet 13. (Column 2 lines 20-21; Figs. 1-3) Wang teach an ion generator having electrodes 21, 22 applied with electricity. (Column 1 lines 65-68) The second electrode is removable from the housing for cleaning. (Column 2 lines 63-68; Column 3 lines 1-5) An ozone lamp is present to restrain the bacteria. The ozone lamp is removable similar to a light tube and can be changed. (Column 2 lines 8-19)

Regarding claim 6, the housing has a top and the second electrode and the ozone tube is removable through the top. (See Figure 2; Column 2 lines 63-68; Column 3 lines 1-5)

The difference between the present claims and Wang is that the use of a removable germicidal lamp is not discussed (claim 5).

Regarding the use of a removable germicidal lamp, Ross suggest that a UV germicidal lamp can be placed to directly irradiate a flowing air stream to eliminate germs. (Column 2 lines 35-46) Since Wang suggest a removable ozone tube to eliminate germs one of ordinary skill in the art would look to Ross to replace the ozone tube with a UV radiation source since both devices function to eliminate germs.

The motivation for utilizing a ultraviolet radiation source is that it allows for killing germs. (Column 2 lines 38-39)

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Wang by utilizing an ultraviolet radiation source a taught by Ross because it allows for killing germs.

Claims 7 rejected under 35 U.S.C. 103(a) as being unpatentable over Wang in view of Ross as applied to claims 5 and 6 above, and further in view of Hsu (U.S. Pat. 5,656,063).

The difference not yet discussed is where the second electrode is removable through the top and the lamp is removable from the side (Claim 7).

Regarding the second electrode removable through the top and the lamp removable from the side, Wang already discussed establishes removing the second electrode through the top. (See Wang discussed above) Hsu discussed above establishes a removable inlet and outlet from the side. (See Hsu discussed above) Since Hsu teach removing the inlets and outlets from the side the Examiner presumes that the lamp can be removed from the side as well. (See Hsu discussed above)

The motivation for removing the lamp and electrode from the apparatus is that it allows for cleaning of the lamp. (See Wang Column 2 lines 63-68; Column 3 lines 1-5)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have removed the second electrode from the top and to have removed the lamp form the side as taught by Hsu because it allows for cleaning of the lamp and second electrode.

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Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang in view of Ross as applied to claims 5 and 6 above, and further in view of Smith et al. (U.S. Pat. 5,641,342).

The difference not yet discussed is where the second electrode has a handle for removing the electrode from the top and where the lamp has a handle for removing the lamp from the top.

Smith et al. teach providing a handle for panels removable from an air cleaning apparatus to allow for ease of removal of the panels form the apparatus and for ease of cleaning and the like. (Column 4 lines 66-68; column 5 lines 1-4)

The motivation for utilizing a handle attached to a panel in an air cleaning apparatus is that it allows for ease of removal of the panels from the apparatus and for ease of cleaning. (Column 4 lines 66-68; column 5 lines 1-4)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have utilized a handle to slide means in and out of an air cleaner as taught by Smith et al. because it allows for ease of removal and for ease of cleaning.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang in view of Ross as applied to claims 5 and 6 above, and further in view of Block, "Disinfection, Sterilization, and Preservation", pp. 33, Fourth Edition 1991.

The difference not yet discussed is the wavelength of ultraviolet radiation utilized.

Block suggest the UV radiation to be utilized for germicidal effect should range, from 328 to 210 nm. (See Page 33)

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The motivation for utilizing radiation within the range of 328 to 210 nm is that it allows for exposing the germs to lethal doses of radiation. (See Page 33)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have utilized radiation in the range of 245 nm as taught by Block because it allows for exposing germs to lethal doses of radiation.

Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang (U.S. Pat. 5,702,507) in view of Ross (U.S. Pat. 4,017,736) and Hsu (U.S. Pat. 5,656,063).

Wang is discussed above and teach an air cleaner and method for cleaning the air cleaner including removing the second electrode through the top of the housing for cleaning. Replacing the second electrode. Removing the ozone tube which kills germs from the housing for replacing. (See Wang discussed above; Wang Column 2 lines 63-68; Wang Column 3 lines 1-3)

The difference between Wang and the present claims is that the utilization of a germicidal lamp in place of the ozone tube is not discussed (Claim 11), removing the germicidal lamp from the side is not discussed (Claim 11), removing the side wall of the housing before removing the germicidal lamp is not discussed (Claim 12), removing the side outlet vent before removing the germicidal lamp (Claim 13) and removing the side vertically louvered vent before removing the germicidal lamp (Claim 14).

Regarding the utilization of a germicidal lamp in place of the ozone tube (Claim 11), Ross teaches utilizing a germicidal UV radiation lamp for killing germs in an air stream. (Ross Column 2 lines 35-46) Since Wang require a device for killing germs it

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would be obvious to substitute a germicidal UV radiation lamp for the ozone tube because both the ozone tube and the germicidal UV radiation lamp kill germs.

The motivation for utilizing a germicidal lamp in place of the ozone tube is that it allows for killing of germs. (Ross Column 2 lines 38-39)

Regarding the removing of the germicidal lamp from the side (Claim 11), Hsu teach that the sides of an air cleaner can be removed. (See Fig. 1 items 16, 18) Since Hsu teach that the sides of an air cleaner can be removed it would be obvious to remove the sides of an air cleaner first in order to remove the interior elements in this case a germicidal killing device from the side.

The motivation for removing the germicidal lamp from the side is that it allows for cleaning the lamp. (Wang Column 2 lines 63-64)

Regarding the removing of the side wall of the housing before removing the germicidal lamp (Claim 12), Hsu teach removing the sides of an air cleaner. Since Hsu teach that the sides of an air cleaner can be removed it would be obvious to remove the sides of an air cleaner first in order to remove the interior elements in this case a germicidal killing device from the side.

Regarding the removing of the side outlet vent before removing the germicidal lamp (Claim 13), Hsu teach removing the side outlet of an air cleaner. (See Hsu Fig. 1 items 18) Since Hsu teach that the side outlet of an air cleaner can be removed it would be obvious to remove the side outlet of an air cleaner first in order to remove the interior elements in this case a germicidal lamp killing device from the side.

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Regarding the removing of the side vertically louvered vent before removing the germicidal lamp (Claim 14), Hsu teach removing a side vertically louvered vent 18. (See Hsu Fig. 1 item 18) Since Hsu teach that the side outlet of an air cleaner can be removed it would be obvious to remove the side outlet of an air cleaner first in order to remove the interior elements in this case a germicidal lamp killing device from the side.

The motivation for removing the side wall of the housing before removing the germicidal lamp, removing the side outlet vent before removing the germicidal lamp and removing the side vertically louvered vent before removing the germicidal lamp is that it allows for accessing the internal components of the air cleaner. (See Hsu Fig. 1)

Therefore, it would have been obvious of ordinary skill in the art at the time the invention was made to have modified Wang by utilizing a germicidal lamp as taught by Ross and by removing the germicidal lamp from the side, removing the side wall of the housing before removing the germicidal lamp, removing the side outlet vent before removing the germicidal lamp and removing the side vertically louvered vent before removing the germicidal lamp as taught by Hsu in combination with Wang and Ross because it allows for killing germs, cleaning the lamp and accessing the interior of the air cleaner.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang in view of Ross and Hsu as applied to claims 11-14 above, and further in view of Block, "Disinfection, Sterilization, and Preservation", pp. 33, Fourth Edition 1991.

The difference not yet discussed is the wavelength of ultraviolet radiation utilized.

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Block suggest the UV radiation to be utilized for germicidal effect should range from 328 to 210 nm. (See Page 33)

The motivation for utilizing radiation within the range of 328 to 210 nm is that it allows for exposing the germs to lethal doses of radiation. (See Page 33)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have utilized radiation in the range of 245 nm as taught by Block because it allows for exposing germs to lethal doses of radiation.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu (U.S. Pat. 5,656,063) in view of Ross (U.S. Pat. 4,017,736) and Wang (U.S. Pat. 5,702,507).

Hsu is discussed above and teach a free standing vertically elongated housing including a top, a first side and a second side generally opposite the first side. A first air vent in the first side of the housing. A second air vent formed in a removable panel. The removable panel adapted to be secured to the second side of the housing. An ion generator in the housing for creating air flow with two electrodes electrically connected for creating air flow. (See Hsu discussed above; See Hsu Fig. 1)

The difference Hsu and the present claims is that a germicidal lamp present in the air flow is not discussed (Claim 19), the elongated collector electrode removable from top of the housing (Claim 19), and where the germicidal lamp is removable through a side of the housing after the removable side panel is removed (Claim 19).

Ross teach placing a germicidal lamp in the air flow to kill germs. (Column 2 lines 34-46)

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The motivation for placing the germicidal lamp in the air flow of an air flow cleaner is that it allows for killing of germs to clean the air. (Column 2 lines 34-46)

Wang teach removing the collector electrode of an air cleaner device from the top of the housing. (Figure 2; Column 2 lines 63-65)

The motivation for removing the collector electrode out of the top of the housing is that it allows for prolonging the lifespan of the air cleaner. (Column 1 lines 41-44)

Hsu teach removing the side of the housing as discussed above. (See Hsu discussed above) Obviously this would allow access to the interior of the apparatus including the lamp within the apparatus.

The motivation for providing removable side housing is that it allows access to the interior of the apparatus. (See Hsu discussed above)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Hsu by utilizing a germicidal lamp present in the air flow as taught by Ross, to have removed the elongated collector electrode from top of the housing as taught by Wang and where the germicidal lamp is removable through a side of the housing after the removable side panel is removed as taught by Hsu in combination with Ross because it allows for cleaning the air of germs and allowing access to the apparatus to allow for prolonging the life of the apparatus.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu (U.S. Pat. 5,656,063) in view of Ross (U.S. Pat. 4,017,736) and Wang (U.S. Pat. 5,702,507).

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Hsu is discussed above and teach a free standing vertically elongated housing including a top, a first side and a second side generally opposite the first side. A first air vent in the first side of the housing. A second air vent formed in a removable panel.

The removable panel adapted to be secured to the second side of the housing. An ion generator in the housing for creating air flow with two electrodes electrically connected for creating air flow. (See Hsu discussed above; See Hsu Fig. 1)

The difference Hsu and the present claims is that a germicidal lamp present in the air flow is not discussed (Claim 20), the elongated collector electrode removable from top of the housing (Claim 20), and where the germicidal lamp is removable through a top of the housing (Claim 20).

Ross teach placing a germicidal lamp in the air flow to kill germs. (Column 2 lines 34-46)

The motivation for placing the germicidal lamp in the air flow of an air flow cleaner is that it allows for killing of germs to clean the air. (Column 2 lines 34-46)

Wang teach removing the collector electrode of an air cleaner device from the top of the housing. Wang also teach removing an ozone tube from the top of the housing. (Figure 2; Column 2 lines 63-65) Since an ozone tube eliminates germs it would be obvious to substitute Ross's germicidal lamp for the ozone tube of Wang.

The motivation for removing the collector electrode out of the top of the housing and ozone tube is that it allows for prolonging the lifespan of the air cleaner. (Column 1 lines 41-44)

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Hsu by utilizing a germicidal lamp present in the air flow as taught by Ross, to have removed the elongated collector electrode from top of the housing as taught by Wang and to have removed the germicidal lamp through a top of the housing as taught by Wang because it allows for cleaning the air of germs and allowing for prolonging the life of the apparatus.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu in view of Ross and Wang applied to claim 20 above, and further in view of Smith et al. (U.S. Pat. 5,641,342).

The difference not yet discussed is the use of user liftable handles to remove the electrodes and the germicidal lamps.

Smith et al. teach providing a handle for panels removable from an air cleaning apparatus to allow for ease of removal of the panels form the apparatus and for ease of cleaning and the like. (Column 4 lines 66-68; column 5 lines 1-4)

The motivation for utilizing a handle attached to a panel in an air cleaning apparatus is that it allows for ease of removal of the panels from the apparatus and for ease of cleaning. (Column 4 lines 66-68; column 5 lines 1-4)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have utilized a handle to slide means in and out of an air cleaner as taught by Smith et al. because it allows for ease of removal and for ease of cleaning.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Block, "Disinfection, Sterilization, and Preservation", pp. 21, pp. 32, 33, pp. 182-190, pp. 553-565, Fourth Edition 1991.

REMARKS:

Prosecution has been reopened based on the Ross reference. Applicant had previously argued that Wang's ozone tube was not a UV germicidal radiation lamp for killing bacteria. The Examiner now relies on Ross with the position that it would be obvious to substitute a UV germicidal lamp for an ozone generating lamp since both devices operate to eliminate germs from the air flow. Block has been cited to teach the state of the art including providing background on UV germicidal radiation to kill germs as well as providing information on ozone to kill germs. Applicant's specification further suggests that it is known to utilize germicidal lamps to kill germs at paragraph 0029.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney G. McDonald whose telephone number is 571-272-1340. The examiner can normally be reached on M- Th with Every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam X. Nguyen can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rodney G. McDonald Primary Examiner Art Unit 1753

RM July 7, 2005